



DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2014-0426; Directorate Identifier 2013-NM-231-AD; Amendment 39-18186; AD 2015-12-11]

RIN 2120-AA64

Airworthiness Directives; The Boeing Company Airplanes

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: We are adopting a new airworthiness directive (AD) for certain The Boeing Company Model 767 and 777 airplanes. This AD was prompted by reports of uncommanded door closure of a large lower lobe cargo door. This AD requires inspecting for part numbers and serial numbers of the rotary actuators of the forward and aft large lower lobe cargo doors, as applicable, and corrective action if necessary. We are issuing this AD to detect and correct rotary actuators made with a material having poor actuator gear wear characteristics, which could result in failure of the rotary actuators for the forward or aft large lower lobe cargo doors and subsequent uncommanded door closure, which could possibly result in fatal injury to people on the ground.

DATES: This AD is effective **[INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]**.

The Director of the Federal Register approved the incorporation by reference of certain publications listed in this AD as of **[INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]**.

ADDRESSES: For Boeing service information identified in this AD, contact Boeing Commercial Airplanes, Attention: Data & Services Management, P. O. Box 3707, MC

2H-65, Seattle, WA 98124-2207; telephone 206-544-5000, extension 1; fax 206-766-5680; Internet <https://www.myboeingfleet.com>. For Eaton service information identified in this AD, contact Eaton Corporation, Aerospace Operations, 3 Park Plaza, Suite 1200, Irvine, CA 92614; telephone 949-253-2100; fax 949-253-2111; Internet <http://www.eaton.com>. You may view this referenced service information at the FAA, FAA, Transport Airplane Directorate, 1601 Lind Avenue SW., Renton, WA. For information on the availability of this material at the FAA, call 425-227-1221. It is also available on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2014-0426.

Examining the AD Docket

You may examine the AD docket on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2014-0426; or in person at the Docket Management Facility between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this AD, the regulatory evaluation, any comments received, and other information. The address for the Docket Office (phone: 800-647-5527) is Docket Management Facility, U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE., Washington, DC 20590.

FOR FURTHER INFORMATION CONTACT: Susan Monroe, Aerospace Engineer, Cabin Safety and Environmental Systems Branch, ANM-150S, FAA, Seattle Aircraft Certification Office, 1601 Lind Avenue SW., Renton, WA 98057-3356; phone: 425-917-6457; fax: 425-917-6590; email: susan.l.monroe@faa.gov.

SUPPLEMENTARY INFORMATION:

Discussion

We issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 by adding an AD that would apply to certain The Boeing Company Model 767 and 777

airplanes. The NPRM published in the Federal Register on June 30, 2014 (79 FR 36678). The NPRM was prompted by reports of uncommanded door closure of a large lower lobe cargo door. The NPRM proposed to require inspecting for part numbers and serial numbers of the rotary actuators of the forward and aft large lower lobe cargo doors, as applicable, and corrective action if necessary. We are issuing this AD to detect and correct rotary actuators made with a material having poor actuator gear wear characteristics, which could result in failure of the rotary actuators for the forward or aft large lower lobe cargo door and subsequent uncommanded door closure, which could possibly result in injury to people on the ground.

Comments

We gave the public the opportunity to participate in developing this AD. The following presents the comments received on the NPRM (79 FR 36678, June 30, 2014) and the FAA's response to each comment.

Support for Rulemaking

United Airlines stated that it concurs with the NPRM (79 FR 36678, June 30, 2014), and FedEx Express stated that it has no technical objections to incorporating the NPRM.

Request to Revise Compliance Time

United Parcel Service (UPS) requested that the compliance time for Model 767 airplanes be revised from 30 months to 72 months to match the 72-month compliance time for Model 777 airplanes. UPS stated that the same actuator part number is used on both Model 767 and Model 777 airplanes and is modified by the same Eaton service information. UPS also contended that the same level of safety can be achieved because the compliance times are "not based on flight cycles but on flight hours," and Model 767 and 777 fleets have common cargo door installations and functions.

We do not agree with the commenter's request to revise the compliance time. The design of the door and the operating system of the door for the two models of airplane are different. The two models are subject to different actuator loading. In developing appropriate compliance times for this action, we considered the safety implications of each design for timely replacement of the actuators. Further, the compliance time matches Boeing's recommended compliance times. However, under the provisions of paragraph (l) of this AD, we will consider requests for approval of an extension of the compliance time if sufficient data are submitted to substantiate that the new compliance time would provide an acceptable level of safety. We have not changed the AD in this regard.

Request to Postpone Re-identification for Already-Modified Parts

Air France requested that operators who have checked their maintenance records and know which serial numbers are on the actuators in their fleet be allowed to keep "post-AD" actuators installed without being required to re-identify those actuators until those actuators are removed for other reasons. Air France stated that an operator that knows exactly which serial numbers are on the rotary actuators on its fleet is aware of which units have already been modified or not.

We do not agree with the commenter's request to postpone re-identification. The task to re-identify the actuator can be done without removing the actuator from the airplane. Re-identification of the actuators, as required by this AD, will ensure that the maintenance records match the airplane configuration. Delaying this re-identification action introduces possible confusion. However, under the provisions of paragraph (l) of this AD, we will consider requests for approval of changes to the compliance time for re-identification if sufficient data are submitted to substantiate that the new compliance time would provide an acceptable level of safety. We have not changed the AD in this regard.

Request to Reference Updated Service Information with Correct Serial Numbers

Eaton and Boeing stated that some actuator serial numbers were omitted from table 1, which identifies parts that do not need to be modified, in Eaton Service Bulletin 692D100-52-4, Revision 2, dated August 1, 2013. Boeing requested that the final rule be delayed until the Boeing and Eaton service information are revised to have the correct numbers. Boeing also stated that if the final rule is not delayed pending issuance of the revised service information, unnecessary actions might be performed on actuators not subject to the unsafe condition. Eaton stated that in table 1, two digits were transposed; what is listed as “3173B” should be “3137B” (i.e., “3173B – 3813B” should be “3137B – 3813B”). Eaton stated that this error omitted serial numbers (S/Ns) 3137 through 3172, which were made with the 9310 steel. Eaton stated that they also reviewed the records for S/N 2257 and found that it was modified by Eaton to contain the 9310 steel and was re-identified as 2257B.

We agree with the commenters’ request to reference updated service information. We have received the revised service information, and agree to revise this final rule to refer to the corrected service information. We have reviewed Eaton Service Bulletin 692D100-52-4, Revision 3, dated August 14, 2014, which contains a revised table 1 that corrects the transposed digits and includes the omitted serial numbers. We have also reviewed Boeing Service Bulletins 767-52A0100, Revision 3, dated January 19, 2015; and 777-52-0053, Revision 2, dated January 19, 2015; which update the reference to Eaton Service Bulletin 692D100-52-4, Revision 3, dated August 14, 2014. The revised service information would provide relief for operators that have those omitted serial numbers. We have revised paragraphs (c), (g), (h), and (i) of this AD to refer to the revised service information and have added new paragraph (j) to this AD to provide credit for previous actions done using the service information referenced in the NPRM (79 FR 36678, June 30, 2014). We have redesignated subsequent paragraphs accordingly.

Request to Grant Credit for Parts with Suffix B

Emirates Airlines requested that credit for the actuator modification be granted for all actuators having part number (P/N) 692D100-13, with serial numbers containing a suffix “B.” Emirates Airlines suggested that the required work for those “suffix B” actuators be limited to re-identification. Emirates Airlines stated that it found actuators having a suffix “B” installed on its Model 777 fleet, but those actuators were not listed in table 1 of Eaton Service Bulletin 692D100-52-4, Revision 2, dated August 1, 2013. Emirates Airlines referenced section 52-34-02 of the Eaton Component Maintenance Manual (CMM), and stated that the CMM states “all serial number 2907 and above are equipped with 692D190-5 no-back brake assemblies and the serial number will carry a suffix ‘B.’ These units with a serial number ‘B’ suffix incorporate ball detent match set P/N 692C130-1.” Emirates Airlines suggested that installation of no-back assemblies with P/N 692D190-5 during production, or repair using section 52-34-02 of the Eaton CMM and Eaton Service Letter 692D100-13 would also address the unsafe condition.

We do not agree to grant credit for all actuators with a “B” suffix. The revised Eaton service bulletin (Eaton Service Bulletin 692D100-52-4, Revision 3, dated August 14, 2014) discussed previously did not include all serial numbers 2907 and above with a “B” suffix in table 1. We also have not received data to substantiate a change to expand the range of acceptable serial numbers. However, under the provisions of paragraph (l) of this AD, we will consider requests for approval of an alternative method of compliance if sufficient data are submitted to substantiate that the change would provide an acceptable level of safety. We have not changed this AD in this regard.

Request to Revise or Remove the Parts Installation Prohibition Paragraph

UPS requested that the wording of the Parts Installation Prohibition paragraph (paragraph (j) for the NPRM (79 FR 36678, June 30, 2014), which has been redesignated as paragraph (k) of this AD) be revised to read “After the Terminating Date of the AD,

Do NOT install a rotary actuator having Boeing part number...” or that the paragraph be removed from the AD. UPS interpreted the proposed prohibition of “As of the effective date of this AD, no rotary actuator having Boeing ... may be installed on any airplane” as prohibiting any of those actuators currently installed on the airplane to remain installed. UPS contended that if leaving an affected actuator on the airplane is acceptable for the duration of the AD, then installing another actuator with the same affected part number within the compliance time of the AD should be acceptable. UPS added that if paragraph (j) of the NPRM were removed or revised, then the concern about spare parts availability would be reduced.

We disagree with the request to revise paragraph (k) of this AD, but provide the following clarification of the intent of paragraph (k) of this AD. Paragraph (k) of this AD does not address parts that are already on the airplane; instead, it affects the installation of an affected replacement rotary actuator done on or after the effective date of this AD. Simply taking a part off and then installing it back on the airplane as part of gaining access for some other maintenance activity not associated with this final rule is not regarded as an installation that is affected by paragraph (k) of this AD.

In developing the technical information on which this final rule is based, we considered the availability of spare parts that this final rule will require and the compliance time, and found that sufficient parts are available. However, under the provisions of paragraph (l) of this AD, we will consider requests for approval of an extension of the compliance time if sufficient data are submitted to substantiate that the new compliance time would provide an acceptable level of safety. We have not changed this AD in this regard.

Effect of Winglets on Accomplishment of the Proposed Actions

Aviation Partners Boeing stated that the installation of winglets per supplemental type certificate (STC) ST01920SE

(http://rgl.faa.gov/Regulatory_and_Guidance_Library/rgstc.nsf/0/59027F43B9A7486E86257B1D006591EE?OpenDocument&Highlight=st01920se) does not affect the accomplishment of the manufacturer's service instructions.

We agree with the commenter that STC ST01920SE (http://rgl.faa.gov/Regulatory_and_Guidance_Library/rgstc.nsf/0/59027F43B9A7486E86257B1D006591EE?OpenDocument&Highlight=st01920se) does not affect the accomplishment of the manufacturer's service instructions. Therefore, the installation of STC ST01920SE does not affect the ability to accomplish the actions required by this AD. We have not changed this AD in this regard.

Conclusion

We reviewed the relevant data, considered the comments received, and determined that air safety and the public interest require adopting this AD with the changes described previously and minor editorial changes. We have determined that these minor changes:

- Are consistent with the intent that was proposed in the NPRM (79 FR 36678, June 30, 2014) for correcting the unsafe condition; and
- Do not add any additional burden upon the public than was already proposed in the NPRM (79 FR 36678, June 30, 2014).

We also determined that these changes will not increase the economic burden on any operator or increase the scope of this AD.

Related Service Information under 1 CFR part 51

We reviewed Boeing Service Bulletins 767-52A0100, Revision 3, dated January 19, 2014; and 777-52-0053, Revision 2, dated January 19, 2015. The service information describe procedures for inspecting for part numbers and serial numbers of the rotary actuators of the forward and aft large lower lobe cargo doors, as applicable, and corrective action if necessary.

Boeing Service Bulletins 767-52A0100, Revision 3, dated January 19, 2015; and 777-52-0053, Revision 2, dated January 19, 2015; refer to Eaton Service Bulletin 692D100-52-4, Revision 3, dated August 14, 2014, which provides serial number information and procedures for doing certain corrective actions (rework of certain rotary actuators or re-identification of certain other rotary actuators).

This service information is reasonably available because the interested parties have access to it through their normal course of business or by the means identified in the **ADDRESSES** section of this AD.

Costs of Compliance

We estimate that this AD affects 510 airplanes of U.S. registry.

We estimate the following costs to comply with this AD:

Estimated costs

Action	Labor cost	Parts cost	Cost per product	Cost on U.S. operators
Inspection for part number and serial number	1 work-hour X \$85 per hour = \$85	None	\$85	\$43,350

We estimate the following costs to do any necessary re-identification or replacements that would be required based on the results of the inspection. We have no way of determining the number of aircraft that might need these re-identifications or replacements:

On-condition costs

Action	Labor cost	Parts cost	Cost per product
Re-identification	Up to 1 work-hour X \$85 per hour = \$85	\$1	Up to \$86
Replacement	Up to 9 work-hours X \$85 per hour = \$765	\$19,700	Up to \$20,465

Authority for this Rulemaking

Title 49 of the United States Code specifies the FAA’s authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. Subtitle VII: Aviation Programs, describes in more detail the scope of the Agency’s authority.

We are issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701: “General requirements.” Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

Regulatory Findings

This AD will not have federalism implications under Executive Order 13132. This AD will not have a substantial direct effect on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify that this AD:

- (1) Is not a “significant regulatory action” under Executive Order 12866,
- (2) Is not a “significant rule” under DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979),
- (3) Will not affect intrastate aviation in Alaska, and
- (4) Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

Adoption of the Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA amends 14 CFR part 39 as follows:

PART 39 - AIRWORTHINESS DIRECTIVES

- 1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

- 2. The FAA amends § 39.13 by adding the following new airworthiness directive (AD):

2015-12-11 **The Boeing Company**: Amendment 39-18186; Docket No. FAA-2014-0426; Directorate Identifier 2013-NM-231-AD.

(a) Effective Date

This AD is effective **[INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]**.

(b) Affected ADs

None.

(c) Applicability

This AD applies to The Boeing Company airplanes identified in paragraphs (c)(1) and (c)(2) of this AD, certificated in any category.

(1) Model 767-200, -300, -300F, and -400ER series airplanes, as identified in Boeing Service Bulletin 767-52A0100, Revision 3, dated January 19, 2015.

(2) Model 777-200, -200LR, -300, -300ER, and 777F series airplanes, as identified in Boeing Service Bulletin 777-52-0053, Revision 2, dated January 19, 2015.

(d) Subject

Air Transport Association (ATA) of America Code 52, Doors.

(e) Unsafe Condition

This AD was prompted by reports of uncommanded door closure of a large lower lobe cargo door. We are issuing this AD to detect and correct rotary actuators made with a material having poor actuator gear wear characteristics, which could result in failure of the rotary actuators for the forward or aft large lower lobe cargo doors and subsequent uncommanded door closure, which could possibly result in fatal injury to people on the ground.

(f) Compliance

Comply with this AD within the compliance times specified, unless already done.

(g) Inspection for Part Numbers, and Re-identification or Replacement, for Model 767 Airplanes

For Model 767-200, -300, -300F, and -400ER series airplanes: Within 30 months after the effective date of this AD, inspect each rotary actuator installed in the forward and aft large lower lobe cargo doors, as applicable, to determine the part number and serial number, and do all applicable corrective actions, in accordance with the Accomplishment Instructions of Boeing Service Bulletin 767-52A0100, Revision 3, dated January 19, 2015; and Eaton Service Bulletin 692D100-52-4, Revision 3, dated August 14, 2014. Do the applicable corrective actions at the applicable time specified in

paragraph 1.E., “Compliance,” of Boeing Service Bulletin 767-52A0100, Revision 3, dated January 19, 2015, except as required by paragraph (i) of this AD. A review of maintenance records for the part number and serial number is acceptable in lieu of the inspection if the part and serial numbers of the rotary actuator can be conclusively determined from that review.

(h) Inspection for Part Numbers, and Re-identification or Replacement, for Model 777 Airplanes

For Model 777-200, -200LR, -300, -300ER, and 777F series airplanes: Within 72 months after the effective date of this AD, inspect each rotary actuator installed in the forward and aft large lower lobe cargo doors, as applicable, to determine the part number and serial number, and do all applicable corrective actions, in accordance with the Accomplishment Instructions of Boeing Service Bulletin 777-52-0053, Revision 2, dated January 19, 2015; and Eaton Service Bulletin 692D100-52-4, Revision 3, dated August 14, 2014. Do the applicable corrective actions at the applicable time specified in paragraph 1.E., “Compliance,” of Boeing Service Bulletin 777-52-0053, Revision 2, dated January 19, 2015, except as required by paragraph (i) of this AD. A review of maintenance records for the part number and serial number is acceptable in lieu of the inspection if the part and serial numbers of the rotary actuator can be conclusively determined from that review.

(i) Exception to the Service Information

Where Boeing Service Bulletin 767-52A0100, Revision 3, dated January 19, 2015; and Boeing Service Bulletin 777-52-0053, Revision 2, dated January 19, 2015, specify a compliance time after the issue date “of this service bulletin,” this AD requires compliance within the specified compliance time after the effective date of this AD.

(j) Credit for Previous Actions

(1) This paragraph provides credit for the actions required by paragraph (g) of this AD, if the actions were performed before the effective date of this AD using Boeing

Service Bulletin 767-52A0100, Revision 2, dated September 26, 2013; and Eaton Service Bulletin 692D100-52-4, Revision 2, dated August 1, 2013. This service information is not incorporated by reference in this AD.

(2) This paragraph provides credit for the actions required by paragraph (h) of this AD, if the actions were performed before the effective date of this AD using Boeing Service Bulletin 777-52-0053, Revision 1, dated September 26, 2013; and Eaton Service Bulletin 692D100-52-4, Revision 2, dated August 1, 2013. This service information is not incorporated by reference in this AD.

(k) Parts Installation Prohibition

As of the effective date of this AD, no rotary actuator having Boeing part number S135W132-3 (supplier part number 692D100-13) may be installed on any airplane.

(l) Alternative Methods of Compliance (AMOCs)

(1) The Manager, Seattle Aircraft Certification Office (ACO), FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the manager of the ACO, send it to the attention of the person identified in paragraph (m)(1) of this AD. Information may be emailed to: 9-ANM-Seattle-ACO-AMOC-Requests@faa.gov.

(2) Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office.

(3) An AMOC that provides an acceptable level of safety may be used for any repair required by this AD if it is approved by the Boeing Commercial Airplanes Organization Designation Authorization (ODA) that has been authorized by the Manager, Seattle ACO, to make those findings. For a repair method to be approved, the repair must

meet the certification basis of the airplane, and the approval must specifically refer to this AD.

(m) Related Information

(1) For more information about this AD, contact Susan Monroe, Aerospace Engineer, Cabin Safety and Environmental Systems Branch, ANM-150S, FAA, Seattle Aircraft Certification Office, 1601 Lind Avenue SW., Renton, WA 98057-3356; phone: 425-917-6457; fax: 425-917-6590; email: susan.l.monroe@faa.gov.

(2) Service information identified in this AD that is not incorporated by reference is available at the applicable addresses specified in paragraphs (n)(3), (n)(4), and (n)(5) of this AD.

(n) Material Incorporated by Reference

(1) The Director of the Federal Register approved the incorporation by reference (IBR) of the service information listed in this paragraph under 5 U.S.C. 552(a) and 1 CFR part 51.

(2) You must use this service information as applicable to do the actions required by this AD, unless the AD specifies otherwise.

(i) Boeing Service Bulletin 767-52A0100, Revision 3, dated January 19, 2015.

(ii) Boeing Service Bulletin 777-52-0053, Revision 2, dated January 19, 2015.

(iii) Eaton Service Bulletin 692D100-52-4, Revision 3, dated August 14, 2014.

(3) For Boeing service information identified in this AD, contact Boeing Commercial Airplanes, Attention: Data & Services Management, P. O. Box 3707, MC 2H-65, Seattle, WA 98124-2207; telephone 206-544-5000, extension 1; fax 206-766-5680; Internet <https://www.myboeingfleet.com>.

(4) For Eaton service information identified in this AD, contact Eaton Corporation, Aerospace Operations, 3 Park Plaza, Suite 1200, Irvine, CA 92614; telephone 949-253-2100; fax 949-253-2111; Internet <http://www.eaton.com>.

(5) You may view this service information at FAA, the FAA, Transport Airplane Directorate, 1601 Lind Avenue SW., Renton, Washington. For information on the availability of this material at the FAA, call 425-227-1221.

(6) You may view this service information that is incorporated by reference at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202-741-6030, or go to:

<http://www.archives.gov/federal-register/cfr/ibr-locations.html>.

Issued in Renton, Washington, on June 9, 2015.

Michael Kaszycki,
Acting Manager,
Transport Airplane Directorate,
Aircraft Certification Service.

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